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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,243	04/07/2004	Jeffrey P. Whitten	532232001100	9571

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EXAMINER

HABTE, KAHSAY

ART UNIT PAPER NUMBER

1624

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/821,243	Applicant(s) WHITTEN ET AL.	
	Examiner Kahsay Habte, Ph. D.	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 29-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 41-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/9/05&10/14/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-46 are pending in this application.

Election/Restriction

2. Applicant's election with traverse of Group I, Claims 1-28 and 41-46 in a paper filed 10/3/2005 is acknowledged. The traversal is on the ground(s) that "courts have definitely ruled the statute authorizing restriction practice...provides no authority to impose a restriction requirement on a single claim". Applicants also argue that "the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all the membered of the Markush group". The examiner disagrees with applicant's argument. A single claim with patentably distinct inventions can be restricted. This is actually a fairly routine practice at USPTO. Note that the inventions of Groups I-IV are distinct one from the other. The variable core created by the varying definitions of **Z** in formula **1** do not belong to the same recognized class of chemical compounds in the art, and references anticipating one invention, would not render obvious the others. Group I is drawn to a fused morpholine (six-membered ring with N and O at 1,4-positions) and is different from Groups II-IV. Group II is drawn to a fused thiomorpholine (six-membered ring with N and S at 1,4-positions) and is different from Groups I and III-IV. Group III is drawn to a fused piperazine (six-membered ring with two nitrogens at 1,4-positions) and is different from Groups I-II and IV. Group IV is drawn to a fused piperidine (six-membered ring with one nitrogen) and is different from

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Groups I-III. Thus, separate searches in the literature as well as in the U.S. Patent Classification System would be required. Each group's compounds are made and used independently of each other and could support separate patents. The compounds differ significantly in chemical structures. One skilled in the art would not consider such diverse structure equivalents of each other. Furthermore coexamination of each of the additional groups would require search of subclasses unnecessary for the examination of the elected claims. For example, the search for the invention of Group II would include search of subclass 544/14 and the search for the invention of Group III would include search of subclasses 546/40 and 546/33. Therefore, coexamination of each of these additional inventions would require a serious additional burden of search.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

3. Applicant's Information Disclosure Statement, filed on 9/9/2005 and 10/14/2004 has been acknowledged. Please refer to Applicant's copies of the 1449 submitted herewith.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-4 and 25-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Schriewer et al. US Pat. No. 4,725,595. Cited reference at columns 15-16 teaches three compounds of interest (see Table 2, compounds 15, 16 and 20) that are the same as applicants when applicant's formula 1 has the following substituents:

V = H; A = F; X = F or Cl; and W = phenylene or phenylene substituted by CF₃.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-28 and 41-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a. Claim 1 and claims dependent thereon are rejected because the phrase "R¹ and R² in NR¹R² may form a double bound" is not clear. It is assumed that "bound" is a typographical error and should read as "bond". How can R¹R² form a double bond with N? Literally, R¹R² form a double bond could mean a nitrogen with two double bonds i.e. N=. Is this what applicants intend? If so, N= can't be a substituents for U or V since it would have dangling valency. For example, C and C form a double bond (i.e. -CH=CH-), but is unclear how R¹R² with the nitrogen atom can form a double bond? It is required that applicants fix the misspelled word "bound" to "bond".

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b. In claim 1 or elsewhere in the ring the phrase " R^1 and R^2 in NR^1R^2 may forma ring" is indefinite. What ring? What is covered and what is not? Are there any other heteroatoms present in the ring beside the N? What is the size of the ring? Nature of the ring? To overcome this rejection, applicants have to recite specific rings as it was done in claim 11.

c. In claim 1 (page 548) and elsewhere in the claims the phrase "optionally substituted" is indefinite. In the absence of the specific moieties intended to effectuate modification by the "substitution" or attachment to the chemical core claimed, the term "substituted" renders the claims in which it appears indefinite in all occurrences wherein applicants fails to articulate by chemical name, structural formula or sufficiently distinct functional language, the particular moieties applicants regards as those which will facilitate substitution, requisite to identifying the composition of matter claimed.

d. In claim 1 (page 548), there is definition of integer n (i.e. n is 1-3), but there is no variable or integer in the core structure that corresponds to this definition.

e. In claim 1 (page 550) and claim 26 (page 554), the phrase " R^5 iseach optionally substituted by halo, =O or one or more heteroatoms" is not clear. What heteroatoms? What is covered and what is not? Can **P** or **Si** be substituted on the alkyl or OR^2 substituents? If so, how? It is recommended that applicants delete said phrase.

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f. In claim 1 (page 550) and claim 26 (page 554), "R⁵ is an inorganic substituent" is indefinite. What is covered and what is not?

g. The proviso "if U is OH, then W represents multiple fused aromatic rings and X is not halo; and X is NH₂, or a moiety that does not contain N, or contains more than 6 carbons" is not clear. Isn't X = NH₂ a nitrogen containing moiety? If so, the phrase "a moiety that does not contain N" is contradictory. In one hand applicants are excluding a moiety that contain N and in the other hand they recite X = NH₂ (a moiety that contain N).

h. Claim 12 is rejected because it is improperly dependent on claim 1. Claim 12 recites "U and X independently have the formula(2)", but there is no formula (2) in claim 1.

i. In claim 46, the phrase "compounds in Figure 1" lacks antecedent basis. Claim 46 depends from claim1, but there is no mention of Figure 1 in claim 1. Applicants have to draw or name the compounds of Figure 1.

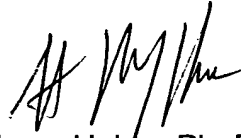
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kahsay Habte, Ph. D. whose telephone number is (571) 272-0667. The examiner can normally be reached on M-F (9.00AM- 5:30PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Wilson can be reached at (571) 272-0661. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kahsay Habte, Ph. D.
Patent Examiner
Art Unit 1624

KH
October 14, 2005